

Work Order ID 61371

Friday, August 20, 2010 3:47:31 PM



Page 1

Item ID: D3688-3

Accept



Setup Start



Revision ID:

Item Name: STUD

Stop



Start Date: 8/23/2010 Start Qty: 6.00



Cust Item ID:

Required Date: 8/30/2010 Req'd Qty: 6.00



Customer:

Reference:

Approvals:

Process Plan: *mt*

Date: *10-8-20*

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool # Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D3688

Rev B

100



BAND SAW

0.00

Bandsaw

Memo

0.00

Jeaspa Bandsaw

DO NOT USE CHOP SAW

☐ Cut blank 9.424" long

SL 10/08/20

6

0

110



DOOSAN LATHE

0.00

Doosan

Memo

0.00

Doosan Lathe

1-Turn as per Folio FA717 Rev: *N/A* & Dwg D3688 Rev: *C* ☐ 2-Deburr
per dwg D3688
3-Check .625" bore with DT9530 GO/NO GO Gauge

SL 10/08/20

6

0

120



QC2- Inspect parts off machine FAI/FAIB

0.00

QC

Memo

0.00

Quality Control

SL 10/08/20

6

0

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

160

QC2- Inspect parts off machine FAI/FAIB

0.00

QC

Memo

0.00

Quality Control

N/A 8/20/10-02-30

170

QC8- Inspect parts - second check

0.00

QC

Memo

0.00

Quality Control

N.A 10/08/28

6 0

180

PURCHASING

0.00

Purchasing

Memo

st 76

0.00

Purchasing

Issue P/O:

12506

☐ LPI Per ASTM 1417 LEVEL

2 ☐ Certificate of conformaty is required

10/13/10

CY 10/19/03 (5)

Rio

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D3688-3 PAR #: _____ Fault Category: machining NCR: Yes No DQA: A Date: 1009.14
 Resolution: Scrap Disposition: Scrap QA: N/C Closed: _____ Date: _____

NCR: <u>61371</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
<u>10/09/02</u>	<u>180</u>	<u>one stud is missing, cannot find it? w/0's marked 6, but only counted 5. RC: 104</u>	<u>[Signature]</u> <u>10/09/02</u>	<u>Continue NDT For the remaining 5.</u>	<u>m/</u> <u>10/09/02</u>	<u>[Signature]</u> <u>1009-02</u>	<u>[Signature]</u> <u>10/09/02</u>	<u>[Signature]</u> <u>1009-02</u>

NOTE: Date & initial all entries

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Revision ID:

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Cust Item ID:

Required Date: 8/30/2010 Req'd Qty: 6.00



Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

190

Receive & Inspect for Damage & Mat'l Certs

0.00



Packaging

Memo

0.00

Packaging

Ensure certificate of conformity is attached

CL 10/9/13 (5)

200

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

Sidelog
- 2 weeks at 15 with unal'n'wip.

(X)

210

Identify as per dwg & Stock Location 276

0.00



Packaging

Memo

0.00

Packaging

10/13/13 (5)

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Required Date: 8/30/2010 Req'd Qty: 6.00



Customer:

Reference:

Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start



QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

220

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

10/09/14

M10-913
⑤

W/O:		WORK ORDER CHANGES					
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NOTE: Date & initial all entries

Picklist Print

Friday, August 20, 2010 3:47:30 PM

Page 1

Work Order ID: 61371



Parent Item: D3688-3



Parent Item Name: STUD

Start Date: 8/23/2010

Required Date: 8/30/2010

Start Qty: 6.00

Required Qty: 6.00

Comments: Rev:A New Issue 08-01-29 JLM Verified By:EC
IPP Rev:B Material Change 09-01-07 JLM Verified By:EC
IPP Rev:C Added note on Step 2 09-01-26 JLM Verified By:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M174PH-H900R1.000		Purchased	No			100	f	26.8000	0.788	4.976842			
17-4SS H900 ROUND BAR 1.00													

Location

Loc Qty

Loc Code

MAT030

26.8

112570

26.8

5.0 SL 10/08/20

W/O:		WORK ORDER CHANGES					
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DART AEROSPACE LTD		Work Order: 61371
Description: Stud		Part Number: D3688-3
Inspection Dwg: D3688	Rev: C	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø0.695	+/-0.010	.700	✓		VERICAL-3	
0.625	+0.004/-0.000	.627	✓		"	
1.25	+0.000/-0.03	1.240	✓		"	
118°	0.5°	118°	✓			
R0.03	+/-0.030	.03	✓			
0.11 Ref	+/-0.030	.11	✓			
90°	0.5°	90°	✓			
Ø0.189	+0.005/-0.001	.189	✓		"	
1.31	+/-0.030	1.325	✓		"	
1.65	+/-0.030	1.645	✓		"	
0.870	+0.000/-0.010	.865	✓		"	
Ø0.659	+0.000/-0.015	.650	✓		"	
9.324	+/-0.015	9.322	✓		VERICAL-02	
2.90	+/-0.030	2.900	✓		VERICAL-3	
3/4-16UNF-2A	N/A	✓				
0.075 x 45°	+/-0.010 x 0.5°	.075 x 45°	✓		"	
0.370	+0.000/-0.010	.365	✓		"	
Ø0.189	+0.005/-0.001	.189	✓		"	
R0.25	+/-0.030	.250	✓		R-G	
R0.50	+/-0.030	.500	✓		R-G	

Measured by: SL	Audited by: H.A	Prototype Approval:	N/A
Date: 10/08/20	Date: 10/08/28	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	09.05.11	New Issue	KJ	
B	09.11.04	Dwg Rev updated	KJ	

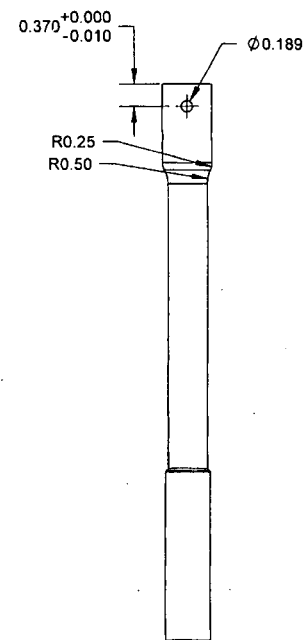
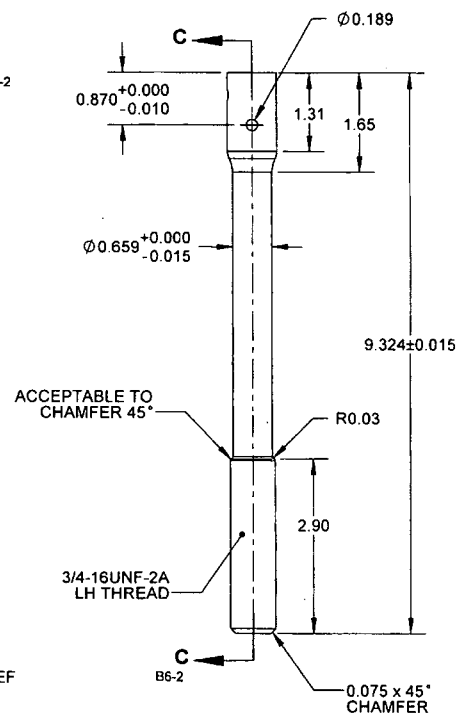
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NOTE: Date & initial all entries



RELEASE
2009-09-22

- NOTES:**
1) MATERIAL: 17-4PH STAINLESS STEEL ROUND BAR PER AMS 5643 H-900 CONDITION
2) FINISH: NONE
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: NONE
7) WEIGHT: 0.97 lb
8) LPI PER QSI 038 4.1.1 (ASTM E1417 LEVEL 2)

DESIGN	RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA DRAWING NO. D3688 TITLE STUD COPYRIGHT © 2006 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS UNDERSTANDING THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR REPRODUCED TO ANY OTHER PERSON WITHOUT THE WRITTEN CONSENT OF DART AEROSPACE LTD.	REV. 0
DRAWN	RF		SHEET 2 OF 2
CHECKED	<i>GP</i>		
MFG. APPR.	<i>GP</i>		
APPROVED	<i>GP</i>		
DE APPR.	<i>GP</i>		
DATE 09.09.09			SCALE NTS

W/O:		WORK ORDER CHANGES					
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LIQUID PENETRANT TEST REPORT

P- 15188

PAGE 1 OF 1

CLIENT DART AEROSPACE DATE 15 SEP 2010 TIME AM ☒ PM ☐
ATTENTION LINDA CHANTAL ACUREN JOB NO. 188-10-0832
ADDRESS 1270 ABERDEEN STREET PO/VO NO. _____
HAWKESBURY ON. WORK LOCATION HAWKESBURY PLANT
16 H 1 K 7 ACCEPTANCE STD. ASTM 1417 REV./DATE 2007
PROJECT F.P.I. ON CROSS TUBES
ITEM(S) EXAMINED 4 PCS. + 5 MACHINED STUDS

JOB DESCRIPTION _____ PROCEDURE NO. LT002 REV./DATE _____ TECHNIQUE NO. LT-Test 2 REV./DATE 2008
PART NO. _____ MATERIAL ALUMINUM THICKNESS VARIABLE
SCOPE WET FLOUORESCENT LIQUID - STAINLESS STEEL
PENETRANT. INSPECTION CARRIED OUT 100% EXTERNAL

TEST DETAILS

METHOD <input checked="" type="checkbox"/> FLUORESCENT <input type="checkbox"/> VISIBLE	<input checked="" type="checkbox"/> WATER WASH <input type="checkbox"/> SOLVENT REMOVABLE <input type="checkbox"/> POST EMULSIFIED
FAMILY BRAND <u>MAGNAFLUX</u>	BLACK LIGHT S/N <u>16459</u> <input type="checkbox"/> OUTPUT > 1000 μ W/cm ² <input type="checkbox"/> AMBIENT < 2 fc
PENETRANT <u>2LG7</u> MINIMUM DWELL TIME <u>45</u> MIN.	LIGHTING EQUIP. <input type="checkbox"/> FLASHLIGHT <input type="checkbox"/> TROUBLELIGHT <input type="checkbox"/> OUTPUT > 100 fc @ SURFACE
PENETRANT REMOVER <u>H2O</u> MINIMUM DRY TIME <u>>10</u> MIN.	OTHER <u>LABINO</u>
DEVELOPER <u>SKD 52</u> MINIMUM DWELL TIME <u>10</u> MIN.	LIGHT METER S/N <u>1098866</u> CAL DUE DATE <u>OCT-19</u>
DEVELOPER TYPE <input checked="" type="checkbox"/> NON AQUEOUS <input type="checkbox"/> AQUEOUS <input type="checkbox"/> DRY	<u>2010</u>

TEST SURFACE

SURFACE CONDITION ☐ AS GROUND ☐ AS WELDED ☐ MACHINED ☐ SHOT BLASTED ☐ CLEAN BARE METAL
SURFACE TEMPERATURE ☐ < -4°C/ 20°F ☐ -4°C/ 20°F TO 10°C/50°F ☐ 10°C/50°F TO 52°C/125°F ☐ > 52°C/125°F

RESULTS- (☐ METRIC ☐ IMPERIAL)

1 - CROSS TUBE - W.O. 61294 ✓
1 - CROSS TUBE - W.O. 61295 ✓
1 - CROSS TUBE - W.O. 61296 ✓
1 - CROSS TUBE - W.O. 61297 ✓
5 - STUDS - W.O. 61371 ✓

8/10/09/09

Scope of Services

The agreement of Acuren Group Inc. to perform services extends only to those services provided for in writing. Under no circumstances shall such services extend beyond the performance of the requested services. It is expressly understood that all descriptions, comments and expressions of opinion reflect the opinions or observations of Acuren Group Inc. based on information and assumptions supplied by the owner/operator and are not intended nor can they be construed as representations or warranties. Acuren Group Inc. is not assuming any responsibilities of the owner/operator and the owner/operator retains complete responsibility for the engineering, manufacture, repair and use decisions as a result of the data or other information provided by Acuren Group Inc. In no event shall Acuren Group Inc.'s liability in respect of the services referred to herein exceed the amount paid for such services.

Standard of Care

In performing the services provided, Acuren Group Inc. uses the degree, care and skill ordinarily exercised under similar circumstances by others performing such services in the same or similar locality. No other warranty, expressed or implied, is made or intended by Acuren Group Inc.

SIGNATURES

CLIENT REPRESENTATIVE <u>Math Murphy</u>	<u>Math Murphy</u>	DTR # <u>E27427</u>
TECHNICIAN (SIGNATURE): <u>Mike Johnston</u>		REPORT REVIEWED BY:
NAME (PRINT): <u>Mike Johnston</u>		NAME INITIALS
CGSB LEVEL _____ SNT LEVEL _____	CGSB LEVEL _____ SNT LEVEL _____	
CGSB REG. No _____	CGSB REG. No _____	